

REMARKS

The application has been amended and is believed to be in condition for allowance.

Originally filed claims 1-8 are canceled and replaced with new claims 9-28, claims 9, 19, and 28 being independent.

The Official Action objected to the drawings for various reasons.

The Official Action indicated on page 2 that reference numerals 411, 416, and 419 were not solid in Figure 4. The undersigned attorney has reviewed the drawing filed and finds that each of these reference numerals is indeed solid. The Official Action indicates that at the proximal end of the figure (top of sheet 3) there appears to be an arrow without a reference number pointing into the first tube. Such an arrow cannot be located.

Accordingly, no amendments to Figure 4 are believed necessary. If there continues to be some confusion, it is requested that an annotated copy of Figure 4 be provided which clearly indicates the elements requiring amendment.

On page 3 of the Official Action, there is indicated to be reference numbers not shown in Figures 1b and 1c. This application does not include such figures. Reference numeral 115 is shown on Figure 2. The undersigned attorney could find no mention of reference numeral 221 or 211 in the specification.

Paragraph 3 of Official Action page 3 indicates that reference numerals 41, 420, and 421 are shown in Figure 4 but not mentioned in the description. Reference numeral 41 could not be found in Figure 4. Reference numeral 421 is also not found in Figure 4. Element 420 was found in the specification and accordingly amended. If there are any remaining objections to the drawing figures, it is requested that annotated copies of the drawing figures and specification showing where the discrepancies arise be provided so that applicant can remedy any necessary defect.

The abstract was amended as to form responsive to the objection raised by the Official Action.

The Official Action objected to certain of the claims and rejected other of the claims under §112, second paragraph, as indefinite.

As noted above, the originally filed claims have been replaced. The new claims have been drafted taking into account these formal objections so as to patentably and in proper form recite the present invention.

Original claims 1, 5, and 8 were rejected as anticipated by HERNANDEZ 5,106,365.

The remaining claims were rejected as obvious over HERNANDEZ in view of GILLIES et al. 6,272,370. GILLIES et al. was offered only as teaching a position indicating object selected to have X-ray opaqueness, be made of gold, be visible

when using NMR, or being a plug made of bio-compatible metal, alloy, amorphous compound, or of a glue with a dispersed compound therein to impart X-ray opaqueness.

Consider independent claim 9 first. Claim 9 recites a first tube extending from a proximal end of the probe to a distal end of the probe. From the Official Action, this would appear to be sheath 2. The claim next recites a membrane inserted over an exterior surface of the tube. The application shows such in Figure 2 with membrane 115 inserted over an exterior surface of first tube 116. However, HERNANDEZ does not make such a disclosure, at least in combination with the remaining recitations of claim 9.

Claim 9 recites a distal end piece comprising a distal end portion of the first tube, a distal end portion of the membrane inserted over an exterior surface of the first tube and extending beyond the distal end of the first tube. The distal end piece is further recited as comprising a position indicating object inserted into the distal end of the first tube and sealing the distal end portion of the first tube and the distal end portion of the membrane. HERNANDEZ does not describe such a constructed distal end piece.

Further, claim 9 recites a space defined by and located between an exterior of the first tube and an interior surface of the membrane. Again, HERNANDEZ is not seen as disclosing such a space.

Claim 9 further recites a proximal tubular fitting attached to the distal end piece, a proximal end of the membrane being fastened to the proximal tubular fitting. There is next recited a proximal end piece permanently fastened to the proximal tubular fitting. Next recited are two further tubes located in the proximal end piece and forming an inlet and an outlet from the probe to let a perfusion liquid pass through the probe.

Claim 9 recites an aperture through a wall portion of the first tube and located adjacent the distal end of the first tube and providing a passage for the perfusion liquid to enter the space. This is also not found in HERNANDEZ.

Lastly, the claim recites the position indicating object allowing non-invasive location of the distal part of the probe when inserted in patient tissue. Such a position indicating object is not found in HERNANDEZ. Note that Figure 4 shows the membrane 7 being closed by the plug and not the first tube being closed by the plug. In Figure 2, the number 10 is the membrane itself. In Figure 3, there is no closed space filled with air.

In view of the above listed recitations, claim 9 is believed to be patentable and its allowance is solicited.

The claims depending from claim 9 recite specific features of the invention and are themselves believed to be patentable.

New independent claim 19 finds its support in the embodiment of application Figure 4, although it is not limited to the specifics disclosed by Figure 4.

For the reasons discussed as to claim 9, the recitations of claim 19 are believed to be patentable. See, for example, the recited membrane fit, at a first end, to the proximal tubular fitting, and at a second end, to the recited distal end piece, an outside diameter of the membrane being less than an outside diameter of the distal end piece. This in combination with the other recited features of this claim are believed to be patentable over the prior art.

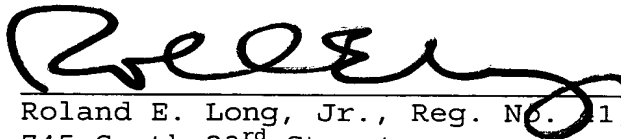
Claim 28 is believed to be patentable for the same reasons outlined as to claim 9.

Accordingly, reconsideration and allowance of all the pending claims are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item:

- amended Abstract of the Disclosure